# **CHAPTER 63**

# GENERAL STANDARDS OF PERFORMANCE

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:001. Definitions for 401 Chapter 63.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

# **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
JUN 24, 1992	OCT 20, 1992	59 FR 32343, JUN 23, 1994 FR Effective: AUG 22, 1994 Conditional Approval
APR 06, 1995	JAN 27, 1995 Submitted for Parallel Processing Final Submittal - May 04, 1995	60 FR 31087, JUN 13, 1995 FR Effective: JUL 28, 1994 Full Approval
JUN 06, 1996	JUN 19, 1996	62 FR 2915, JAN 21, 1997 FR Effective: MAR 24, 1997
JUN 09, 1999		

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:002. 40 C.F.R. Part 63 national emission standards for hazardous air

pollutants

CURRENT STATUS: Federally Enforceable Regulation

MACT-NESHAP 40 C.F.R. Part 63

Replaced: 401 KAR 63:070, 401 KAR 63:100, 401 KAR 63:101, 401 KAR 63:104, 401 KAR 63:110, 401 KAR 63:160, 401 KAR 63:190, 401 KAR 63:300, 401 KAR 63:320, 401 KAR 63:340, 401 KAR 63:360, 401 KAR 63:400, 401 KAR 63:420, 401 KAR 63:460, 401 KAR 63:520, 401 KAR 63:541, 401 KAR 63:560, 401 KAR 63:640, 401 KAR 63:680, [and] 401 KAR 63:701, 401 KAR 63:741, 401 KAR 63:780, 401 KAR 63:800, 401 KAR 63:820, 401 KAR 63:900, 401 KAR 63:920, 401 KAR 63:940, and 401 KAR 63:960.

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
JUL 14, 1999	No Action Required - Delegation of Authority automatic under Title V	
MAR 18, 2002	No Action Required - Delegation of Authority automatic under Title V	
SEP 10, 2003	No Action Required - Delegation of Authority automatic under Title V	

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:005. Open burning.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

# **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
JUN 06, 1979	JUN 29, 1979	45 FR 84999, DEC 24, 1980 FR Effective: EC 24, 1980 Conditional Approval
		45 FR 84999, JUL 12, 1982 FR Effective: SEP 10, 1982 Full Approval
MAR 01, 1984	MAY 01, 1984	No Action Required
JAN 12, 1998	FEB 03, 1998	63 FR 67586, DEC 08, 1998 FR Effective: FEB 08, 1999 (VOC 15% Reduction Plan)

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:010. Fugitive emissions.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

# **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 29, 1979	JUN 29, 1979	47 FR 30059, JUL 12, 1982 FR Effective: SEP 10, 1982 (Non-Part D SIP)

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:015. Flares.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

**RACT Regulation** 

# **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	47 FR 30059, JUL 12, 1982 FR Effective: SEP 10, 1982

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:020. Potentially hazardous matter or toxic substances.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

# **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	47 FR 30059, JUL 12, 1982 FR Effective: SEP 10, 1982

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:021. Existing sources emitting toxic air pollutants.

CURRENT STATUS: Not Federally Enforceable

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 11, 1986		
JAN 19, 1999		

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:022. New or modified sources emitting toxic air pollutants.

CURRENT STATUS: Repealed by 401 KAR 63:024 (January 19, 1999)

Not Federally Enforceable

# **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 11, 1986		

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:025. Asphalt paving operations.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

RACT/VOC

Based on Group I CTG (EPA-450/2-72037)

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	47 FR 84999, JUL 12, 1982 FR Effective: SEP 10, 1982
JUN 24, 1992	OCT 20, 1992	59 FR 32343, JUN 23, 1994 FR Effective: AUG 22, 1994

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:031. Leaks from gasoline tank trucks.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

RACT/VOC

Based on Group I CTG (EPA-450/XXX)

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
AUG 24, 1982	SEP 20, 1982	48 FR 13168, MAR 30, 1983 FR Effective: APR 29, 1982
FEB 08, 1993	FEB 17, 1993	59 FR 32343, JUN 23, 1994 FR Effective: AUG 22, 1994

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:042. Requirements for asbestos abatement entities.

CURRENT STATUS: Not Federally Enforceable

Recodified to 401 KAR 58:040 (June 10, 1997)

# **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
NOV 06, 1987		
JAN 25, 1989		

## FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:045. School asbestos abatement accreditations.

CURRENT STATUS: Recodified to 401 KAR 58:005 (February 24, 1992)

Federally Enforceable Regulation AHERA (40 CFR 763, Subpart F)

No Federal Waiver for Kentucky at Time of Recodification

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
OCT 05, 1988 Emergency Regulation 63:045E		
JAN 25, 1989		

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:050. Local education agencies.

CURRENT STATUS: Recodified to 401 KAR 58:010 (February 24, 1992)

Federally Enforceable Regulation AHERA (40 CFR 763, Subpart E)

No Federal Waiver for Kentucky at Time of Recodification

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
OCT 05, 1988 Emergency Regulation 64:050E		
JAN 25, 1989		

#### FOR REFERENCE ONLY - DO NOT CITE

63:060

401 KAR 63:060. List of hazardous air pollutants, petitions process, lesser quantity

designations, and source category list

CURRENT STATUS: Authority Delegated to Kentucky

Under the Title V Program Federally Enforceable Regulation

Recodified from 401 KAR 57:061 (July 02, 1997)

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 29, 1993	JAN 18, 1994	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995
JUN 10, 1998	No Action Required - Delegation of Authority automatic under Title V	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:070]

401 KAR 63:070. Compliance extensions for early reductions of hazardous air

pollutants.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart D

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
FEB 22, 1995	JAN 18, 1995 Submitted for parallel processing	60 FR 57186, NOV 14, 1995

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:100. General provisions.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart A

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
DEC 12, 1994	JAN 25, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995

#### FOR REFERENCE ONLY - DO NOT CITE

[63:101]

401 KAR 63:101. National emission standards for organic hazardous air pollutants from

the synthetic organic chemical manufacturing industry

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart L

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:104]

401 KAR 63:104. National emission standards for oil-water separators and organic-

water separators

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart L

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

63:105

401 KAR 63:105. Requirements for control technology determinations for major sources

in accordance with Clean Air Act Section 112(g) & (j)

CURRENT STATUS: Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
APR 14, 1999	No Action Required - Delegation of Authority automatic under Title V	
AUG 13, 2003	No Action Required - Delegation of Authority automatic under Title V	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:110]

401 KAR 63:110. National emission standards for organic hazardous air pollutants from

the synthetic organic chemical manufacturing industry for process

vents, storage vessels, transfer operations and wastewater.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:160]

401 KAR 63:160. National emission standards for organic hazardous air pollutants for

equipment leaks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:190]

401 KAR 63:190. National emission standards for organic hazardous air pollutants for

certain processes subject to the negotiated regulation for equipment

leaks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:300. National emission standards for coke ovens.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart L

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
DEC 12, 1994	JAN 25, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995

#### FOR REFERENCE ONLY - DO NOT CITE

[63:320]

401 KAR 63:320. National perchloroethylene air emission standards for dry cleaning

facilities.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
DEC 12, 1994	JAN 25, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995

#### FOR REFERENCE ONLY - DO NOT CITE

[63:340]

401 KAR 63:340. National emission standards for chromium emissions fro hard and

decorative chromium electroplating and chromium anodizing tanks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:360]

401 KAR 63:360. Ethylene oxide emissions standards for sterilization facilities.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:400]

401 KAR 63:400. National emission standards for hazardous air pollutants for industrial

process cooling towers.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:420]

401 KAR 63:420. National emission standards for gasoline distribution facilities (bulk

gasoline terminals and pipeline breakout stations).

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:460]

401 KAR 63:460. National emission standards for halogenated solvent cleaning.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:520]

401 KAR 63:520. National emission standards for organic hazardous air pollutants for

certain processes subject to the negotiated regulation for equipment

leaks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:541]

401 KAR 63:541. National emission standards for organic hazardous air pollutants from

secondary lead smelting.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:560]

401 KAR 63:560. National emission standards for marine tank vessel loading

operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:640]

401 KAR 63:640. National emission standards for hazardous air pollutants from

petroleum refineries.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:380]

401 KAR 63:380. National emission standards for hazardous air pollutants from off-site

waste and recovery operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:701]

401 KAR 63:701. National emission standards for magnetic tape manufacturing

operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

#### FOR REFERENCE ONLY - DO NOT CITE

[63:741]

401 KAR 63:741. National emission standards for aerospace manufacturing and rework

facilities.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:780]

401 KAR 63:640. National emission standards for shipbuilding and ship repair (surface

coating).

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	<b>Federal Register Publication</b>
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:800]

401 KAR 63:800. National emission standards for wood furniture manufacturing

operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:820]

401 KAR 63:820. National emission standards for the printing and publishing industry.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:900. National emission standards for tanks - Level 1.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:920. National emission standards for containers.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:940]

401 KAR 63:940. National emission standards for hazardous air pollutants from off-site

waste and recovery operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE

[63:960]

401 KAR 63:960. National emission standards for individual drain systems.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

## **HISTORY**

KY Effective Date	<b>Submitted to EPA</b>	<b>Federal Register Publication</b>
JUN 10, 1998		

#### FOR REFERENCE ONLY - DO NOT CITE